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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,630	09/15/2000	Takao Miyazaki	0879-0276P	4062

7590 03/29/2004

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EXAMINER
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JERABEK, KELLY L

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 03/29/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/662,630

**Applicant(s)**

MIYAZAKI ET AL.

**Examiner**

Kelly L. Jerabek

**Art Unit**

2612

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 2/19/2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of claims 1-5 and 8-15 in Paper No. 5 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1 and 8 rejected under 35 U.S.C. 102(e) as being anticipated by  
Robley et al. US 5,061,061.**

Re claim 8, Robley discloses in figure 1 a photography system including a studio (10) or "video taking box" that accommodates an actor (21). The studio (10) includes projectors (42,44,46) that project images on projection screens (12,22) of the studio

(col. 5, lines 64-68; col. 6, lines 1-16). The projectors (42,44,46) read out and project background images onto the projection screens (12,22) (col. 6, lines 1-29). The camera (14) faces the projection screen (12) and takes an image of an actor (21) and superimposes the image of the actor on the background image formed on the projection screens (12,22) (col. 6, lines 17-40).

Re claim 1, see claim 8.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley as applied to claims 1 and 8 respectively and further in view of Ewert US 6,142,913.**

Re claim 10, Robley includes all of the limitations of claim 8 above. In addition, Robley states that for scenes requiring coordinated motion between the staged scene

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and background scene actors can be placed on treadmills (col. 5, lines 4-17). Although Robley discloses the above, he does not explain the specifics of how this can be done.

Ewert discloses in figure 1 an exercise device (14) positioned in front of a television receiver (18) and connected to a game CD player (20) (col. 5, lines 57-65). A control program in accordance with the invention modifies the video sequence rate in the CD player (20) fed to the TV (18) commensurately with the speed that the user (12) is pedaling (col. 7, lines 1-7). This helps to create the effect that the user (12) is moving in accordance with the synchronization of the pedaling and the video sequence rate. Although a bicycle is used as the exercise device (14), the apparatus may also include a treadmill (col. 12, lines 3-7). Treadmills including control programs for synchronizing the video sequence rate of a video and the speed of the treadmill are well known and used in the art as shown by Ewert. Therefore, it would have been obvious to include the treadmill capable of synchronizing treadmill speed and video sequence rate as disclosed by Ewert in the studio disclosed by Robley. Doing so would provide a means for synchronizing the video sequence rate of the background image with the speed of the treadmill that the user is walking on in order to create the effect that the user is walking through the virtual space.

Re claim 2, see claim 10.

**Claims 3 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley in view of Ewert as applied to claims 1,2, and 8 respectively, and further in view of Cherry US 3,711,812.**

Re claim 11, Robley in view of Ewert includes all of the limitations of claims 8 and 10 above. Although Robley in view of Ewert displays the synchronization of treadmill speed and the moving speed to the background image, the combined teaching does not disclose a treadmill capable of remote control operation.

Cherry discloses in figure 1 a treadmill including a control unit (20). The control unit (20) may be removed for remote control (col. 3, lines 5-15). Treadmills including control units capable of provide remote control are well known and used in the art as shown by Cherry. Therefore, it would have been obvious to include the treadmill capable of remote control as disclosed by Cherry in the virtual studio including a treadmill disclosed by Robley in view of Ewert. Doing so would provide a means for synchronizing the video sequence rate of the background image with the speed of the treadmill that the user is walking on using a remote control in order to create the effect that the user is walking through the virtual space.

Re claim 3, see claim 11.

**Claims 4, 12, 14 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley as applied to claims 1 and 8 respectively and further in view of Barwacz et al. US 5,986,718.**

Re claim 12, Robley includes all of the limitations of claim 10 above. Although Robley discloses a studio for superimposing images of an actor with a background image, he does not explicitly disclose illumination devices that illuminate the subject and that adjust color temperature and brightness in accordance with the color temperature and brightness of the background image.

Barwacz discloses in figure 3 a photobooth (10) that forms a composite image (fig. 1C) from a subject in the foreground (fig. 1A) and a pre-stored background (fig. 1B) using a chroma-key technique (col. 1, lines 29-67). The photobooth (10) includes illumination lights (80a, 80b, 90a, 90b) that have variable color temperatures in accordance with the color temperature and brightness of the background image (col. 9, lines 13-67) according to a chroma-key technique. The use of illumination devices that have varying color temperature according to the color temperature and brightness of a background image according to a chroma-key technique are well known and used in the art as shown by Barwacz. Therefore, it would have been obvious to include the illumination devices that have varying color temperature according to the color temperature and brightness of a background image and the chroma-key technique disclosed by Barwacz in the studio disclosed by Robley. Doing so would provide a

means for controlling the illumination of the two superimposed images so that the composite image has a uniform brightness and color temperature.

Re claim 4, see claim 12.

Re claim 14, although the walls of the studio disclosed by Robley are not used as the projection screens for projection of background images it would have been obvious to project the images directly onto the walls of the studio provided that the walls have the same characteristics as the provided projection screens (12, 22). Robley discloses two cameras (14,40) for obtaining images from two different projection screens. Although Robley only disclosed cameras for two of the walls of the studio, it would have been obvious to include a camera and screen for each wall of the studio so that a superimposed image could be taken for each wall of the studio. Although Robley discloses that above limitations, he does not explicitly state that the plurality of cameras and illumination devices are built into each of the walls of the room.

Barwacz disclosed in figure 3 a photobooth (10) including a camera (20). The photobooth (10) forms a composite image (fig. 1C) from a subject in the foreground (fig. 1A) and a pre-stored background (fig. 1B) using a chroma-key technique (col. 1, lines 29-67). The photobooth (10) includes illumination lights (80a,80b,90a,90b) that have variable color temperatures in accordance with the color temperature and brightness of the background image (col. 9, lines 13-67) according to a chroma-key technique. The illumination lights (80a,80b,90a,90b) and the camera (20) are mounted to a housing



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(15) that serves as a wall of the photobooth (10). Mounting cameras and illuminating lights to a housing or wall of a photographing room or booth are well known and used in the art as shown by Barwacz. Therefore, it would have been obvious to include the method of mounting illumination devices and cameras in the housing or walls of the photobooth as disclosed by Barwacz in the studio disclosed by Robley. Doing so would provide a means for obtaining superimposed images of a subject and a background using each wall of the studio as a background and a camera and illuminating device corresponding to each wall of the studio.

Re claim 15, since Robley discloses more than one camera and light source in the studio it would have been obvious to include a switching device to switch between the pairs of cameras and light sources depending on which device was desired to be used.

**Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley as applied to claim 8 in view of Bourn et al. US 6,022,124.**

Re claim 13, Robley includes all of the limitations of claim 8 above. However, Robley does not state that a ring light encloses the television cameras and serves as an illumination device for illuminating the object.

Bourn discloses in figure 1A a machine-vision illumination system (100) including a camera (140) (col. 6, lines 19-33). The camera (140) views an object (160) through

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an opening in a ring-reflector illumination source (200) (col. 6, lines 27-33). Thus, the ring-reflector illumination source (200) encloses the camera. The ring-reflector illumination source (200) of the machine-vision illumination system (100) serves to reduce shadows of the object (col. 17, lines 8-17). Ring-reflector illumination sources are well known and used in the art as shown by Bourn. Therefore, it would have been obvious to include the ring-reflector illumination source (200) of the machine-vision illumination system (100) disclosed by Bourn in the studio disclosed by Robley. Doing so would provide a means for illuminating the subject to be taken while avoiding taking a shadow of the subject.

**Claims 5 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Robley.**

Re claims 5 and 9, the examiner takes Official Notice that it is well known in the art for cameras to include microphones that record sound and speakers to reproduce sound stored within the camera. It would have been obvious to one of ordinary skill in the art at the time of invention for the camera of Robley to include a microphone to record sound, an audio storing device to store the sound, and a speaker to output the stored sound.

***Contacts***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kelly Jerabek whose telephone number is (703) 305-8659. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary examiner, Wendy Garber can be reached at (703)-305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

The fax number for submitting all Official communications is (703) 872-9306.

The fax number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at (703) 746-3059.

KLJ

  
VU LE  
PRIMARY EXAMINER